

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of: B. Gibson et al.

Attorney Docket: H0003690

Application No.: 10/766,430

Art Unit: 1713

Filed: 01/28/2004

Examiner: W.K. Cheung

For: EXTRUDABLE PVC COMPOSITIONS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Statement for Pre-Appeal Brief Request for Review

Dear Sir:

In response to the Final Office Action dated **April 24, 2007** and accompanying the Notice of Appeal, the following statements in support of a Pre-Appeal Brief Request for Review are provided.

REMARKS

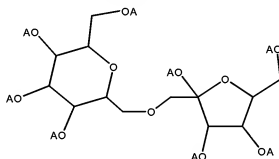
Claims 1 to 18, 67 and 71 to 85 are currently pending. In the Final Action of April 24, 2007, claims 1 to 18, 67 and 71 to 85 are rejected as allegedly anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 3,635,856 to Kaneko et al. (hereinafter "Kaneko") "as affirmed by" the Mitsubishi-Kagaku internet publication entitled "Introduction of Sugar Esters" and having a copyright date of 2002 (hereinafter "Mitsubishi").

Applicants respectfully request reconsideration and withdrawal of such rejection for at least the rationale that the above-detailed references do not disclose or suggest each and every element of the presently claimed invention alone or in combination. In particular, the pending claims define an extrusion process that requires the use of a composition comprising saccharide ester compounds. Importantly, the claims also require that at least about 50 wt % of the saccharide esters in the composition are compounds which are ester substituted in all eight possible locations, that is, they are octa-substituted. The Examiner rejected these claims based on prior art which discloses only generically that saccharide esters can be used in an extrusion process.

The Examiner reasoned that the disclosure of 50% by weight of octa-substituted esters is inherent in such a generic teaching and that therefore the claims are invalid under § 102(b). Under the Examiner's reasoning, a claim to a species could never issue when the prior art discloses a genus, and that is simply not true.

Summary of the Invention

Applicants' claimed invention defines a process for extruding a resin-containing composition. The process comprises the steps of a) providing an extrudable mass comprising at least one extrudable resin and at least one saccharide ester of Formula I:



Formula I

wherein each "A" is independently hydrogen or has the structure of Structure I



Structure I

wherein each "R" is independently an aliphatic or aromatic moiety of about eight to about 40 carbon atoms, and wherein all of the "A" moieties of at least about 50 wt. % of the compounds of Formula I comprise moieties of Structure I; and extruding said extrudable mass to produce an extrudate (see Claim 1). The extrudable composition may also include at least one additional constituent selected from the group consisting of supplemental lubricants, supplemental heat stabilizers and combinations of these (see Claim 67).

Applicants have unexpectedly discovered that the relative amount of highly substituted compounds which make up the saccharide ester of the present invention

can have a significant beneficial effect on the processing characteristics of the shapeable composition and therefore on the present extrusion methods. In particular, applicants have discovered that compositions in which at least 50% by weight of saccharide esters are octa-substituted saccharide esters in accordance with the present invention demonstrate an ***unexpectedly superior dynamic stability value*** and an ***unexpectedly superior dynamic heat stability performance*** relative to those results achieved with saccharide esters analogous to those described in Kaneko (see First Durrenberger Declaration and Second Durrenberger Declaration). Applicants respectfully submit that this is a dramatic and highly desirable result, and furthermore that this result is not in any way suggested by the prior art.

Discussion of the Rejection Under 35 U.S.C. § 102(b)

In the Action of April 14, 2005, the Examiner asserts that generic claims to the process of extruding an extrudable mass comprising "at least one extrudable resin and at least one saccharide ester" are disclosed in Kaneko (see Action at 2-3). In the Reply as filed on August 19, 2005, the claims were amended to more clearly specify that at least about 50 wt % of the compounds had all eight "A" moieties of the saccharide ester Formula I in accordance with Structure I, *i.e.* 50 weight % are octa-substituted saccharide esters.

In the Action of August 11, 2006 and Final Action of April 27, 2007, the Examiner clarifies his view that octa-substituted saccharide esters are inherently disclosed in Kaneko by explaining that because Kaneko is silent on "a mixture" of sucrose alkyl esters or "a partially esterified sucrose ester" (see Action at 3 to 4; Final Action at 3 to 6), the sucrose alkyl esters of Kaneko include eight different species of sucrose alkyl esters, mono to octa substituted, and thus mixtures of same include up to 100 wt % octa substituted saccharides (see Final Action at 5 to 6). Simply put, the Examiner argues that Kaneko not only inherently teaches octa substituted saccharides, but also teaches such saccharides in at least about 50 wt % of the composition.

However, Kaneko ***does not*** contain any explicit or inherent disclosure of a mixture of saccharide esters of the present invention wherein at least about 50 wt % of the saccharide esters in accordance with Formula I are octa-substituted saccharide

esters. The only disclosure in Kaneko regarding sucrose alkyl ester substitution is that such compounds:

include mono-esters or diesters of fatty acids having an alkyl group with 12 to 18 carbon atoms and mixtures thereof. As the sucrose alkyl ester, there are exemplified sucrose myristyl ester, sucrose stearyl ester and the like. (Col. 4, lines 46-53).

It is known to those of ordinary skill in the art that sucrose alkyl esters, by virtue of their chemical structure, may range from mono to octa substituted. As admitted by the Examiner, Kaneko, however, **does not** contain any specific disclosure regarding the ratios and identities of various substituted saccharide esters to be used. As such, Kaneko does not expressly disclose the presently claimed mixture which comprises at least about 50 wt % octa-substituted sucrose esters.

Kaneko also does not inherently disclose the presently claimed mixture of substituted sucrose esters. An inherent disclosure **only** exists where the recited claim feature is necessarily present when the teaching of the cited reference is followed. One of ordinary skill in the art could choose infinite combinations of various substituted sucrose esters within the scope of Kaneko and not obtain the presently claimed composition containing at least about 50 wt % octa-substituted sucrose esters. As such, the general disclosure of "mixtures" of substituted sucrose esters in Kaneko **is not** an inherent disclosure of a composition in which at least about 50 wt % of the esters are octa-substituted esters. Accordingly, the presently claimed invention is not anticipated, either expressly or inherently, by Kaneko.

The presently claimed invention is also unobvious over Kaneko. Kaneko fails to teach or suggest particular combinations of substituted sucrose esters. Kaneko does not recognize the need for extrusion compositions having better general stability or heat stability values, nor does it provide any suggestion that extrudable compositions containing a high percentage of octa-substituted saccharide esters in accordance with the present invention demonstrate **unexpectedly superior dynamic stability value** and an **unexpectedly superior dynamic heat stability performance**, as demonstrated by the Declarations cited above. Accordingly, Kaneko contains no teaching or suggestion that would motivate one of ordinary skill in the art, at the time of

the present invention, to produce the presently claimed invention with the expectation of achieving the unexpectedly superior dynamic stability value and heat stability performance of the presently claimed invention. Accordingly, the presently claimed invention is patentable over Kaneko.

The Examiner's reasoning can also be shown to be faulty by simple analogy. The present claim can be analogized to a claim to method of hunting prey using a pride of lions in which the age of the lions could be 1 to 8 years old, but in which the claim requires 50% of the pride to be 8 years old. The prior art cited by the Examiner is equivalent to a teaching of a pride of lions to hunt prey. It is without doubt that such a teaching does not expressly or inherently disclose a method of hunting in which at least 50% of the lions are eight years old. Moreover, such a teaching does not suggest that improved hunting efficiency is achieved when 50% of the lions are eight years old. The Examiner's reasoning is faulty and his rejection is improper as a matter of law.

Conclusion

The foregoing is submitted as a full and complete response to the Action mailed on April 27, 2007, and the allowance of all claims is respectfully requested. The Office is invited to contact Applicants' undersigned counsel by telephone in order to further the prosecution of this case in any way.

The Commissioner is hereby authorized to charge the fee required and any additional fees that may be needed to Deposit Account No. **19-5425**.

Respectfully submitted,

Dated: May 29, 2007

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